

Revisiting theoretical predictions of the motion and direction of FTE's

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Abstract

Flux Transfer Events (FTEs) are magnetopause signatures that result from the passage of flux ropes produced by transient bursts of reconnection. They exhibit bipolar signatures in the component of the magnetic field normal to the magnetopause and transient increases or crater-like structures in the magnetic field strength. We use the bipolar magnetic field signatures and magnetic field strength variations observed by all four Cluster spacecrafts during the years of 2002 and 2003 to determine the velocity and direction of FTE motion for comparison with predictions for the motion of FTEs generated by the component and anti-parallel reconnection models.